Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of the claims in the application.

Listing of Claims

1. (canceled)

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (canceled)

7. (canceled)

8. (canceled)

9. (canceled)

10. (currently amended) The method of packet grooming and aggregation as claimed in ~~claim 9~~ claim 13 wherein said scheduling step occurs in accordance with said flow context.

11. (currently amended) The method of packet grooming and aggregation as claimed in claim 10 further including the steps of:

receiving said search key,

performing a wildcard linear search against predetermined search key fields of said flow database,

fetching said flow context from said flow database, and

outputting said flow context.

12. (canceled)

13. (currently amended) ~~The method of packet grooming and aggregation as claimed in claim 12~~

A method of packet grooming and aggregation within an Ethernet over SONET/SDH system (EOS system), said method comprising:

receiving a data packet tagged according to an encapsulation scheme and including a tag and a port or channel ID;

providing an input client frame from said data packet to a header unit;

extracting a search key including said port or channel ID and said tag from said input client frame via said header unit;

correlating said search key via a lookup engine to a match in a flow database to determine flow context;

modifying said input frame via a tag editor according to said flow context;

buffering said input client frame via a flow FIFO;

applying discard policies to said flow FIFO based on said flow context; and

scheduling said input client frame via a scheduler of the flow FIFO for transmission into output channels according to output channel status and flow quality of service parameters,

wherein said correlating step occurs in accordance with a combined ingress table and egress table in a bi-directional lookup manner, and further including the steps of:

receiving said search key,

upon determining an ingress lookup,

performing a first wildcard linear search of said search key against predetermined ingress flow fields of a bi-directional flow database,

fetching flow context from said egress flow fields of said bi-directional flow database,

upon determining an egress lookup,

performing a second wildcard linear search of said search key against predetermined egress flow fields of a bi-directional flow database,

fetching flow context from said egress flow fields of said bi-directional flow database,

modifying a portion of said egress flow fields according to predetermined rules, and

outputting said flow context.

14. (canceled)

15. (canceled)